

APPENDIX: III-C

Province of



Saskatchewan

DEPARTMENT OF MINERAL
RESOURCES

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Geophysical Exploration Regulations

Under The Mineral Resources Act
Governing Geophysical Exploration Within the
Sedimentary Basin Area of Saskatchewan

O/C 1261/55

Gazetted June 24, 1955

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GEOPHYSICAL EXPLORATION REGULATIONS

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Preface

Due to the increased activity in geophysical exploration in the province during the past few years, the need for a set of regulations governing this exploration has become evident. These regulations have been compiled in an attempt to meet this need.

In drawing up the regulations contained in this booklet, a thorough review was made of the conditions and problems encountered in our own province, as well as those found elsewhere. The views of the industry were taken into consideration to avoid any detrimental effect on operational procedures and overall efficiency.

The essential aim of these regulations is to maintain a high standard of work by the various geophysical operators and at the same time to protect the interests of the general public.

J. H. Brockelbank

Part 1

INTRODUCTORY

1. These regulations may be cited as The Geophysical Exploration Regulations.

DEFINITIONS

2. In these regulations, unless the context otherwise requires:

- (a) "Approved" means approved by the Department;
- (b) "Cap wire" or "Cap leg wire" means the wire attached to the detonator;
- (c) "Community" shall include any city, town, village or hamlet;
- (d) "Crew Certificate" means a certificate issued pursuant to these regulations in respect to a crew operating geophysical equipment under the authority of a licence;
- (e) "Department" means the Department of Mineral Resources;
- (f) "Detonator" includes "blasting cap";
- (g) "Director" means the Director of Petroleum and Natural Gas;
- (h) "Explosive" does not include "detonator";
- (i) "Geophysical equipment" means any equipment used or employed in geophysical exploration;
- (j) "Geophysical exploration" means any method of applying a physical science to the determination of geologic or other conditions which may lead to the discovery of an accumulation of hydrocarbons and/or any other mineralization within the sedimentary section, and includes:
 - (1) seismic
 - (2) gravimetric
 - (3) magnetic and aeromagnetic

- (4) radioactive and aeroradioactive
 - (5) electrical
 - (6) geochemical
 - (7) structure drilling or core drilling
 - (8) any other method of testing the subsurface of the sedimentary basin;
- (k) "Improved territory" means territory in which public highways or roads are maintained by municipal or governmental authorities;
- (l) "Inspector" means:
- (1) Such persons as may be appointed or authorized by:
 - (i) The Minister of Mineral Resources
 - (ii) The Minister of Natural Resources
 - (iii) The Minister of Highways and Transportation or
 - (iv) The Minister of Municipal Affairs;
 - (2) All members of the Royal Canadian Mounted Police;
 - (3) The Reeve of each rural municipality and any person or persons appointed for such purpose by the council of each rural municipality;
- (m) "Licence" means a licence issued pursuant to these regulations;
- (n) "Minister" means the Minister of the Department;
- (o) "Monument" means a monument as defined in The Land Surveys Act;
- (p) "Municipality" means any municipality and includes any Local Improvement District and any Northern Saskatchewan Administration District;
- (q) "Operator" means the holder of a licence;
- (r) "Patented lands" means lands for which a certificate of title has been granted under The Land Titles Act;

Rescind paragraph (w) of section 2 and substitute therefor the following:

(w) "Structure Test Hole" or "Test Hole" means any hole of diameter less than six inches drilled to a point below the drift for the purpose of obtaining geological and structural information, but excluding those holes drilled for seismic testing. The limiting depth of a structure test hole shall be 1,000 feet or the base of the Second White Specks where that horizon lies below 1,000 feet.



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- (s) "Public Highway" means a public highway as defined in The Highways and Transportation Act;
- (t) "Public Lands" mean any Crown lands whatsoever and include;
 - (1) Municipal lands
 - (2) Statutory road allowances
 - (3) Public highways
 - (4) Roads other than privately owned roads;
- (u) "Road" means any vehicle access route other than a public highway;
- (v) "Road allowance" means a road allowance as defined in The Highways and Transportation Act;
- (w) "Test hole" means any hole drilled in the course of geophysical exploration for any purpose other than for the firing of a shot, such hole being of a diameter less than six inches and drilled to a point below the drift, but not penetrating the geological stratum known as the Second White Specks;
- (x) "Shot hole" means a hole drilled for the purpose of firing a charge of explosive, whether or not the charge is fired;
- (y) "Trees" in addition to the ordinary meaning, include bushes, shrubs, and young growth of forest cover.

Part II

LICENCES

3. (1) Any person desiring to operate geophysical equipment within the sedimentary basin area of Saskatchewan shall first obtain a licence to do so, unless he is employed by and performing a duty or operation on behalf of a principal who is the holder of such a licence.

- (2) Application for a licence to operate geophysical equipment shall be made to the Director on a form prescribed by the Minister.
 - (3) A holder of a licence shall apply to the Director on a form prescribed by the Minister for a crew certificate for each crew employed by him for the purpose of operating geophysical equipment, and no operator shall cause or permit any person or crew to operate geophysical equipment until such crew certificate has been issued.
 - (4) The application for a licence shall be accompanied by a fee of twenty-five dollars, which fee shall be refunded if the licence is not granted.
 - (5) The application for a crew certificate shall be accompanied by a fee of five dollars, which fee shall be refunded if the certificate is not granted.
- 4. Each application shall be subject to a review by the Minister who may grant or refuse the licence and/or crew certificate.
 - 5. The effective dates of licences and crew certificates shall be the dates of issuance, and they shall expire on the following March 31st.

Part III

CONDITIONS OF OPERATION

- 6. (1) Prior to the commencement of any ground operations, the operator shall take such precautions as may be necessary to ensure that no monument is defaced, altered, disturbed, or damaged during the course of geophysical exploration.
- (2) If a monument is destroyed, moved, or damaged by an operator, he shall make a full report immediately to the Controller of Surveys, who shall have the matter investigated



and the following year he was elected to the House of Commons for the constituency of Northampton. He was a member of the Whig party, and supported the cause of the American Colonies. In 1776 he was appointed a member of the Committee of Correspondence, and in 1777 he was elected a member of the Committee of Safety. He was a strong advocate of the cause of independence, and was instrumental in securing the adoption of the Declaration of Independence. He was a member of the Continental Congress from 1776 to 1778, and served as a delegate to the Constitutional Convention in 1787. He was a member of the House of Representatives from 1789 to 1791, and served as a member of the Senate from 1791 to 1793. He was a member of the House of Representatives again from 1795 to 1801, and served as a member of the Senate from 1801 to 1803. He was a member of the House of Representatives again from 1805 to 1807, and served as a member of the Senate from 1807 to 1811. He was a member of the House of Representatives again from 1813 to 1815, and served as a member of the Senate from 1815 to 1817. He was a member of the House of Representatives again from 1819 to 1821, and served as a member of the Senate from 1821 to 1823. He was a member of the House of Representatives again from 1825 to 1827, and served as a member of the Senate from 1827 to 1829. He was a member of the House of Representatives again from 1831 to 1833, and served as a member of the Senate from 1833 to 1835. He was a member of the House of Representatives again from 1837 to 1839, and served as a member of the Senate from 1839 to 1841. He was a member of the House of Representatives again from 1843 to 1845, and served as a member of the Senate from 1845 to 1847. He was a member of the House of Representatives again from 1849 to 1851, and served as a member of the Senate from 1851 to 1853. He was a member of the House of Representatives again from 1855 to 1857, and served as a member of the Senate from 1857 to 1859. He was a member of the House of Representatives again from 1861 to 1863, and served as a member of the Senate from 1863 to 1865. He was a member of the House of Representatives again from 1867 to 1869, and served as a member of the Senate from 1869 to 1871. He was a member of the House of Representatives again from 1873 to 1875, and served as a member of the Senate from 1875 to 1877. He was a member of the House of Representatives again from 1879 to 1881, and served as a member of the Senate from 1881 to 1883. He was a member of the House of Representatives again from 1885 to 1887, and served as a member of the Senate from 1887 to 1889. He was a member of the House of Representatives again from 1891 to 1893, and served as a member of the Senate from 1893 to 1895. He was a member of the House of Representatives again from 1897 to 1899, and served as a member of the Senate from 1899 to 1901. He was a member of the House of Representatives again from 1903 to 1905, and served as a member of the Senate from 1905 to 1907. He was a member of the House of Representatives again from 1909 to 1911, and served as a member of the Senate from 1911 to 1913. He was a member of the House of Representatives again from 1915 to 1917, and served as a member of the Senate from 1917 to 1919. He was a member of the House of Representatives again from 1921 to 1923, and served as a member of the Senate from 1923 to 1925. He was a member of the House of Representatives again from 1927 to 1929, and served as a member of the Senate from 1929 to 1931. He was a member of the House of Representatives again from 1933 to 1935, and served as a member of the Senate from 1935 to 1937. He was a member of the House of Representatives again from 1939 to 1941, and served as a member of the Senate from 1941 to 1943. He was a member of the House of Representatives again from 1945 to 1947, and served as a member of the Senate from 1947 to 1949. He was a member of the House of Representatives again from 1951 to 1953, and served as a member of the Senate from 1953 to 1955. He was a member of the House of Representatives again from 1957 to 1959, and served as a member of the Senate from 1959 to 1961. He was a member of the House of Representatives again from 1963 to 1965, and served as a member of the Senate from 1965 to 1967. He was a member of the House of Representatives again from 1969 to 1971, and served as a member of the Senate from 1971 to 1973. He was a member of the House of Representatives again from 1975 to 1977, and served as a member of the Senate from 1977 to 1979. He was a member of the House of Representatives again from 1981 to 1983, and served as a member of the Senate from 1983 to 1985. He was a member of the House of Representatives again from 1987 to 1989, and served as a member of the Senate from 1989 to 1991. He was a member of the House of Representatives again from 1993 to 1995, and served as a member of the Senate from 1995 to 1997. He was a member of the House of Representatives again from 1999 to 2001, and served as a member of the Senate from 2001 to 2003. He was a member of the House of Representatives again from 2005 to 2007, and served as a member of the Senate from 2007 to 2009. He was a member of the House of Representatives again from 2011 to 2013, and served as a member of the Senate from 2013 to 2015. He was a member of the House of Representatives again from 2017 to 2019, and served as a member of the Senate from 2019 to 2021.

and arrange for the restoration of the monument, and the operator shall make payment for such restoration in the sum assessed by the Controller of Surveys.

- (3) Restoration of the monument shall be made by a Saskatchewan Land Surveyor under the direction of the Controller of Surveys.

7. (1) Any clearing of land or disturbance of soil on public lands shall be subject to investigation by an inspector, and the operator may be required to restore the land surface to the satisfaction of the inspector.
- (2) Any instructions given to the operator by an inspector shall be reported in writing by the latter to the operator, and to the Controller of Surveys as circumstances dictate.
- (3) No tree, brush, debris, refuse, or other material shall be left within the limits of a road allowance, but shall be cleared away in such a fashion as not to prevent drainage or leave a fire hazard. Refuse that cannot be adequately disposed of at or near the scene of its occurrence shall be returned to field headquarters.
- (4) Where conditions are such that a road, road allowance, or public highway is likely to be damaged by use of heavy equipment, geophysical operations shall be suspended until the operator has obtained permission from the municipality concerned, or from the Department of Highways and Transportation to enter the road, road allowance, or public highway, and satisfactory arrangements are made for the restoration of the surface.
- (5) Where road or public highway construction is under way, no geophysical operations shall proceed in the vicinity of the construction unless permission has been obtained from the Department of Highways and Transportation or from the municipality as the case may require.

- (6) On unimproved road allowances where an operator constructs a road for access to his operations, any work, such as clearing, construction of culverts or bridges, or the filling in of low places, shall be done in the centre of the road allowance, and the costs shall be borne by the operator.
 - (7) Damage to an improved road or public highway resulting from the use of the road or public highway by an operator as access to his operations shall be repaired, and the costs borne by the operator.
 - (8) If, in the opinion of the Minister of Highways and Transportation, or the Minister of Natural Resources, any work performed in the construction of a roadway by an operator is unsatisfactory, the Minister concerned may require the operator to restore the surface as nearly as possible to its original condition, and the costs shall be borne by the operator.
8. (1) No ditching, clearing, or grading shall be done within three feet of the limits of a road allowance.
- (2) No shot hole shall be drilled within ten feet of the nearest boundary of a road allowance, and, in the case of an improved road, shot holes shall be drilled wherever possible between the said ten foot limit within the road allowance and the nearest ditch to that limit.
- (3) (a) No shot hole shall be drilled within twenty-five feet of a driveway, or gateway, or within six hundred feet of a residence, school, church, or other public building.
- (b) Where a shot hole is drilled and/or shot in the vicinity of any habitation, dwelling, or improvement area, the operator shall take every precaution to avoid occurrence of damage and to protect the public safety.
- (4) A test hole or shot hole shall be drilled at a sufficient distance from a water well to prevent the well or water from being affected

Amendment (2) of Section 8 and
inserts therefore the following:

- (2) No shot hole shall be drilled within four feet of the nearest boundary of a dwelling, and in the case of an improved road, shot holes shall be drilled whenever possible between the road four feet apart within the one allowance and four feet from the lowest toe of the slope of the road bed.

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or damaged, and in no case shall the distance be less than six hundred feet.

- (5) No test hole shall be drilled within fifty feet of a driveway, or gateway, or within two hundred and fifty feet of a residence, school, church, or other public building.
- (6) No test hole shall be drilled to a depth exceeding 200 feet within the limits of a road, or road allowance, unless permission to do so has been obtained in writing from the Director.
- (7) No shot hole or test hole shall be drilled within twenty feet of a monument, or a section or quarter section survey corner, or a point where such a corner is located if the pin marking the same is missing.

- 9. (1) No operations shall be conducted within the limits of a city, town, or village, without the consent in writing of the city, town or village being first obtained, and a copy of the consent supplied to the Director.
- (2) Before commencing any operations within a municipality, the operator shall inform the secretary of the municipality of the roads, road allowances, or public highways to be used in his projected operations, and immediately the operations cease the operator shall notify the secretary.
- (3) No spikes, pins or other pointed metals, or stakes, shall be driven into the bed of a public highway or road in the performance of geophysical exploration, and if such spikes, pins or other pointed metals, or stakes, are required, they may be driven into the shoulder of the public highway or road, provided they are removed when no longer required.

- 10. A test hole or shot hole shall be drilled at a sufficient distance from any gas, oil, or water pipe line, cable transmission line, or utility of any nature buried under the surface, to ensure the uninterrupted use of the utility, and in no case

shall the distance from a gas, oil, or water pipe line be less than one hundred and twenty feet, and any other utility forty feet.

11. If, in drilling operations, any underground water is released and flows to the surface, no further drilling of the hole shall be done, the hole shall be plugged immediately to prevent the flow of water, and its location shall be reported immediately by the operator to the Director, provided that such hole may be completed as a water well if:
 - (a) arrangements have been made previously with the legal or equitable owner of the surface so to complete the hole;
 - (b) the flow of water is properly controlled; and
 - (c) completion of the hole will not result in damage to other lands or property or interfere with the rights of others.
12. If, as a result of operations, any damage occurs, whether by the caving in of the sides of any hole, by interference with drainage, by the release of underground water, or otherwise, the operator shall take immediate steps to remedy the damage, shall attempt to prevent any recurrence thereof, and shall bear all costs incurred in so doing.
13. If, upon being informed of damage caused by him or due to his exploration operations, an operator fails to take immediate action to repair the damage, the Minister may have the damage repaired, and the operator, in addition to any other penalty to which he may be subject, may be assessed twice the cost incurred in making the necessary repairs.
14. Before any operations are undertaken in timbered areas a preliminary plan of operations in duplicate shall be filed with the Director.
15. Every operator shall familiarize himself and each member of his crew with The Forests Act, and Forest Regulations, as well as with The Prairie and Forest Fires Act, and shall be responsible for

any fire which starts, directly or indirectly, personally, or through any employee or agent of said operator, upon or adjacent to the lands on which operations are being conducted, and the services of the operator and his employees shall be given free to combat any fire that starts on or threatens the land or improvements on which operations are being conducted, or the land or improvements adjacent thereto.

16. (1) The operator shall file with the Director each month a plan in duplicate showing the location of all trails made or constructed in timbered areas during the preceding month.
(2) If the operations are in surveyed territory, the plan shall be on a scale not smaller than that of one inch to the mile, or if the operations are in unsurveyed territory, the plan shall be on a scale not smaller than that of one-half inch to the mile.
17. The operator shall allow any person the use of any trails or roads constructed or built by him upon public lands, or maintained in connection with the exploratory operations, for ordinary travel either on foot or by vehicle, free of charge.
18. (1) If any public land is held under lease, permit, or other form of terminable grant, or has been disposed of by the Crown pursuant to an Act or Regulation which contemplates the issue of a notification, the operator, before entering on the land, shall procure the consent of persons having the right to the use of the surface.
(2) The operator, before entering on any patented land, shall procure the consent of the owner and of persons having the right to the use of the surface.
(3) In obtaining consents required by this section, the person conducting the exploration shall describe accurately to the owner or his agent, and to the occupant where the land is occupied, the line to be followed in the oper-

ations and the course to be followed by any automotive equipment used, and he shall not vary such line or course without the further consent of the persons from whom consent first was required.

19. If a bridge, culvert, fence, gate, or other property is damaged in the performance of an operation, the person operating the geophysical equipment that caused the damage shall restore immediately the property as nearly as possible to its original condition or, if it is not possible to make the repairs immediately, shall take the necessary steps to safeguard against further hazard or damage and have the repairs made with as little delay as possible.
20. The operator shall forward a monthly report to the Director (on forms supplied by the Department) containing the following information:
 - (a) the location of the headquarters of each crew operating under the authority of a geophysical licence and any proposed change in the location;
 - (b) the name of the principal for whom operations are being conducted;
 - (c) the type of geophysical exploration employed;
 - (d) the general area covered.
21. (1) Each piece of automotive equipment, including bulldozers, used in geophysical exploration, with the exception of passenger vehicles used by supervisory personnel, shall be legibly inscribed on each side in letters and figures not less than four inches high, with the number of the geophysical licence under the authority of which it is operated as follows; "Licence No." (Insert Number)
(2) A piece of automotive equipment shall not be marked with more than one geophysical licence number.



- 20 (2) Within 30 days after the end of each calendar year, the operator shall forward to the director two copies of a report outlining the method of plugging used and the location of all seismic shot holes drilled during the year.

22. A test hole, before or immediately after being drilled, shall be marked with a metal tag on which the number of the licence shall be inscribed in a way that shall not become illegible or obliterated, and the tag shall be fixed in close proximity to, and not more than thirty feet from the hole, and, where the hole is on a road allowance or roadway, the tag shall be on the same side of the road.
23. (1) When abandoning a test hole, the drilling mud and any material obtained from the hole during drilling shall be returned to fill the hole, and, upon compliance with subsections (2) or (3), the remaining mud or other material shall be spread over the ground as nearly as possible to its original condition.
- (2) A four foot plug shall be inserted firmly in the hole to a depth of two feet below the surface, and:
- (a) if the plug is cement or concrete the hole shall be filled and well tamped;
- (b) if the plug is wood there shall be placed immediately over it either a plank two inches thick, one foot wide, and two feet long, or six inches of dry cement, and the hole shall be filled and well tamped.
- (3) The hole may be plugged by any other method approved in writing by the Minister.
24. In improved territory, the drilling mud and any material obtained from a shot hole shall be returned to the hole and the hole plugged firmly in the following manner:
- (a) A wooden or cement plug of a diameter not less than that of the hole, and of a length of not less than two feet, shall be driven into the hole to a depth of one foot below the surface, and the hole shall be filled and well tamped; or
- (b) by a method approved in writing by the Minister.

25. If winter conditions prevent the proper insertion of a plug, or the proper tamping, a plug may be inserted temporarily to the level of the surface, and, as soon as the frost is sufficiently out of the ground, the hole shall be completed in accordance with section 23 or 24.
26. In territory which is not improved, all shot holes shall be plugged firmly in the following manner:
 - (a) a wooden or cement plug of a diameter not less than that of the hole, and of a length of not less than two feet, shall be driven into the hole to the level of the surface, and the surrounding ground well tamped; or
 - (b) by a method approved in writing by the Minister.
27. The drilling crew shall leave all holes temporarily plugged or covered until the arrival of the firing crew.
28. If the firing of a shot disturbs the plug of a previously abandoned hole, the operator by or for whom the shot was fired shall recomplete the plugging of the previously abandoned hole in compliance with this Part.

Part IV

STORAGE, HANDLING, TRANSPORTATION, AND FIRING OF EXPLOSIVES

29. No operator shall permit any workman to handle and fire explosives unless such handling and firing is under the personal supervision at the shot-point of a person who is the holder in good standing of a Certificate of Efficiency issued by the Director. Such person should also be the holder of a Certificate of First Aid approved by The Workmen's Compensation Board.
30. (1) Except under special circumstances, no Certificate of Efficiency will be granted by the Director to any person who has had less than

six months experience in the handling and firing of explosives under the direct supervision of, and instruction by a person holding such certificate.

- (2) A Certificate of Efficiency shall be in good standing during the time the holder continues in the employment in which he was at the date of the issuance of the Certificate, unless revoked sooner by the Director.
- (3) In general, and without in any way relieving the operator of his responsibility under these regulations, the holder of a Certificate of Efficiency shall be responsible under these regulations for the safety and safe conduct of all persons in the vicinity of, or engaged in the handling and firing of explosives.
31. (1) All storage magazines shall be located in conformity with the following table of distances:

Max. Amount of Dynamite in Mag.	Distance from Inhabited Buildings	Distance from Public Railway	Distance from Public Highway
1,000 lb.	1,020 ft.	610 ft.	310 ft.
1,500 lb.	1,060 ft.	640 ft.	320 ft.
2,000 lb.	1,200 ft.	720 ft.	360 ft.
3,000 lb.	1,300 ft.	780 ft.	390 ft.
4,000 lb.	1,420 ft.	850 ft.	420 ft.
5,000 lb.	1,500 ft.	900 ft.	450 ft.

provided that no storage magazines shall be located at a distance of less than one mile from the nearest inhabited dwelling of any community.

- (2) All magazines shall be completely sheathed on the outside with boiler plate of sufficient thickness to deflect small arms ammunition or other missiles.
- (3) The interior of such magazines shall be completely lined with tongue and groove lumber or an adequate substitute of non-sparking non-conducting material such as plywood, masonite, fibre board, or the like, provided that all screws or nails shall be countersunk

and covered by an adequate filler, and all cracks kept securely sealed.

- (4) Magazines shall be adequately ventilated and protected by suitable locking devices against breaking and entering.
- (5) All explosives and detonators shall be stored in their respective magazines.
- (6) Separate storage magazines shall be maintained for detonators and explosives. The magazines shall be separated by a distance of at least 150 feet.
- (7) No material other than explosives or detonators shall be stored in a magazine.
- (8) Brush and other inflammable debris shall be kept at least 25 feet from the magazine.
- (9) No cartridge or part cartridge of explosives shall be placed in any magazine unless contained in a box similar to the one in which explosives are shipped by the manufacturer.

- 32. Lighting of storage magazines shall be by natural means, provided that if artificial lighting is required, portable electric lanterns or flashlights approved for use in hazardous locations shall be used.
- 33. (1) Explosives shall not be transported in any form of trailer, and a vehicle transporting explosives shall not tow any form of trailer.
- (2) Transportation of explosives and detonators from the storage magazine to the place of work by gasoline or oil-driven vehicles shall be done by vehicles providing separate, enclosed, locked compartments. All explosives and detonators shall be stored in their respective magazines. The compartment for detonators shall be removed from the compartment for explosives by not less than six inches of solid lumber or its equivalent.
- (3) Vehicles transporting explosives shall be:
 - (a) clearly marked front and rear with signs carrying the word "EXPLOSIVES" in

- letters of a height of not less than six inches, such letters being red on a white background or vice versa;
- (b) marked on each corner of the vehicle during daylight by a red flag not less than one foot square;
 - (c) marked during darkness by amber lights on the two front corners and by red lights on the two rear corners of the vehicle, (standard clearance lights will suffice);
 - (d) equipped with at least two approved fire extinguishers in good working order, and with such other equipment as flags, flares, and the like, as is required to be used under and by virtue of the provisions of The Vehicles Act and Regulations thereto; and
- (e) equipped with a First Aid Kit approved by the Workmen's Compensation Board.
- (4) No material other than explosives shall be carried in the explosives compartment of vehicles containing explosives.
 - (5) (a) Vehicles containing explosives shall not be taken inside a garage or other building.
 - (b) Explosives shall not be kept in or on a vehicle while it is being repaired, except in cases where emergency running repairs on such vehicles are being performed.
 - (6) Every operator owning or contracting vehicles for conveying explosives shall establish a "Preventive Maintenance Schedule" for these vehicles which will ensure that:
 - (a) fire extinguishers are filled and in working order;
 - (b) electric wiring is completely insulated and firmly secured and protected by suitable fuses;

- (c) gasoline tank and feed lines have no leaks;
 - (d) brakes and steering apparatus are in good condition.
34. When explosives are drawn from the magazine the older explosives shall be removed first.
35. (1) No person shall smoke when handling explosives.
- (2) No person being in the vicinity of explosives shall smoke during periods when such explosives are being handled, nor at any time when the magazine is open.
36. (1) Explosives shall not be placed near an open flame light, fire, or directly heated stove.
- (2) No explosive shall be used unless, immediately prior to its use, it is drawn from the case in which it was received from the manufacturer thereof, and the case, is plainly marked with the name of the manufacturer, the descriptive name of the explosive, and its date of manufacture.
- (3) Explosives which have deteriorated, as evidenced by damage to the cartridge, or by exudation therefrom, or by soft, mushy cartridges which have an oily or greasy appearance and surface texture, shall not be used in any blasting operation, but shall be promptly destroyed by approved methods. Explosives shall not be burned except by the direct order of the supervisor of the crew or party concerned.
- (4) The priming of cartridges shall be done only at or near the place of use. When a charge is primed, all other explosives at or near the shot point shall be kept inside the explosives compartment of the magazine. Compartments shall be kept closed until the primed charge is fired or otherwise rendered harmless. The making up of a second charge before the first one is fired is prohibited.

- (5) The shunt shall not be removed from the cap leg wire until the charge is in the hole in position to fire, except that where the depth of the hole is greater than the length of the cap leg wire, such wire shall then be connected to the short circuited firing line, and the charge lowered into firing position before the firing line is connected to the exploder.
- (6) No blasting operations shall be engaged in during an electrical storm.
- (7) Cap leg wires shall be unravelled slowly, and while the charge is being lowered into the hole, and in no circumstances shall they be unravelled by being thrown or dragged along the ground.
- (8) No magazine containing explosives shall be left unattended, unless it is situated or located in the manner provided in section 31 of these regulations.
- (9) Poles used for the loading of shot holes shall be of wood, except as to the fittings, which shall be of some non-sparking material.
- (10) Explosives shall not be tamped with undue force.
- (11) The warming of explosives is prohibited.
- (12) Detonators or explosives shall not be carried in the pockets of workmen's clothing.
- (13) When conducting blasting operations in the neighborhood of buildings, railways, public highways, or inhabited areas, the shooter shall take adequate precautions against possible injury to persons and property by limiting the explosive charge to an absolute minimum, by the use of protective mats over the shot hole, by the closing of approaches and thoroughfares to the shot point, or by other such precautions as are indicated at the time.
- (14) When blasting operations are being carried on, the shooter shall ensure that all persons

are protected from the danger of falling rocks, flying debris, mud, and the like.

- (15) No explosive shall be left in a hole unless sufficient earth is placed in the hole to secure the explosive, and unless any wires attached to the explosive are left a safe distance below the surface, until the explosive is properly fired or removed and placed in safe keeping. In the case where an explosive charge fails to discharge, every effort shall be made to detonate it immediately by another shot. If it is impossible or unsafe to carry out the above procedure, the charge and any wires remaining attached thereto shall be buried in the hole, and the hole filled with earth and plugged in accordance with these regulations.
- (16) Before abandoning a shot point, all portions of charges which have been blown from the shot hole, all wrappings of boxes used in the handling of explosives, and all other waste from the blasting operations shall be destroyed or carried away.
- (17) While at the shot point, the exploder shall at all times be kept under the direct supervision and control of the shooter.
- (18) The testing of circuits shall be done by the use of a galvanometer equipped with a silver chloride cell.
- (19) Immediately after firing, whether the charge has exploded or not, and before anyone goes to inspect the shot hole or the firing line, the shooter shall break the connection between the exploder and the said line and shall short circuit such line. The exploder shall remain disconnected from the firing line until the next charge is in position to fire.
- (20) When shooting under or near any power line, primacord shall be used as the means of initiating the charge in the hole.
- (21) Cap wires shall not be anchored to a fence.

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SCHURLE

O.C. 2303/55

Second subsection 20 of Section 36 and
substitute therefore the following:

When shooting under or near any power
line, primacord shall be used as the means
of initiating the charge in the bolt pro-
vided that an alternative method may be ap-
proved, except the shooting, the alternative
method is approved by the Minister and
notice of such approval is received from
the Department.

- (22) All workmen engaged in the handling and firing of explosives shall, during the course of such engagement, wear safety hats equipped with a cradle which shall be provided by the employer.
- (23) Cases of explosives shall be opened with a wedge and mallet, both made entirely of wood or of other non-sparking material.
- (24) Sticks of dynamite shall be cut by placing on a wooden surface and cutting with a bronze knife with a fixed blade.
- (25) The shooter or his helper shall not stand over, or look directly into the open shot hole while loading same.
- (26) Shooting within one mile of a permanent radio broadcasting transmitter is prohibited. When operating with a radio transmitter on the shooting truck, the power switch of such transmitter must be in the OFF position at all times while there are detonators outside their magazine or above ground.

Part V

GENERAL

- 37. The special, written consent of the Minister concerned must be filed with the Director before any geophysical operations are carried out in the following restricted areas:
 - (1) Provincial parks
 - (2) Provincial forests
 - (3) Areas in which underground mines are located.
- 38. If the geophysical operations are conducted upon patented lands, the requirements of these regulations, excepting section 11, may be modified by agreement between the operator and the owner of the surface, provided such modification does

not interfere with, or affect the rights of other persons, and a copy of this agreement is filed with the Department.

39. Any notice required to be served on an operator pursuant to these regulations may be served verbally or in writing on any person of authority operating or performing a duty or work for or on behalf of an operator.
40. The Department may authorize any inspector to issue orders, and, when an inspector who is so authorized by the Department, observes the use or apparent use of unsafe equipment or materials, or tools, or the existence of unsafe working conditions which are not specifically covered by these regulations, he may issue an order requiring the operator to make such changes, improvements or repairs, as may be necessary to remove hazards to workmen, or to reduce the possibility of accidents.
41. (1) The operator shall be responsible for any contravention of these regulations occurring by reason of his operations, or the operations of any other person performing any duty or work for or on behalf of the operator, and, if at any time he has failed to abide by the regulations herein mentioned or referred to, he may be required to go back to the scene of his delinquency and correct the same.
(2) If, while under contract to undertake geo-physical exploration for a client, an operator is delinquent in regard to these regulations, the client may also be held responsible.

Part VI

PENALTIES

42. (1) If an operator, or anyone performing any duty or work under the authority of a licence or crew certificate, fails to comply with the

provisions of these regulations, the Minister may cancel or suspend the licence or the crew certificate concerned, depending upon the nature of the offence.

- (2) If an operator, or anyone performing a duty for or on behalf of an operator fails to comply with written instructions, the Minister may cancel his licence or the crew certificate concerned.
 - (3) The Certificate of Efficiency of any person shall be subject to cancellation for any violation of or non-compliance with these regulations by such person.
 - (4) If any question arises as to interpretation of these regulations, or of failure to comply with these regulations, the Minister shall be the sole judge thereof, and there shall be no appeal from his decision.
43. Any operator who disobeys, or refuses, or neglects to carry out any of the provisions of these regulations shall be guilty of an offence, and liable on summary conviction to a penalty not exceeding one thousand dollars, and, in default of payment, to imprisonment for a term not exceeding six months.
44. Nothing in these regulations shall affect or be held to limit or interfere with proceedings that may be taken under any other law in effect in Saskatchewan.

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